

# Exhibit 1

UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF NORTH CAROLINA  
FAYETTEVILLE DIVISION

UNITED STATES OF AMERICA

v.

JEFFREY R. MacDONALD

Nos. 75-26-CR-3  
90-104-CIV-3-D

AFFIDAVIT OF PHILIP G. CORMIER  
NO. 2 -- REQUEST FOR ACCESS TO EVIDENCE  
TO CONDUCT LABORATORY EXAMINATIONS -- IN  
SUPPORT OF JEFFREY R. MacDONALD'S MOTION TO  
REOPEN 28 U.S.C. § 2255 PROCEEDINGS AND FOR DISCOVERY

I, PHILIP G. CORMIER, being first duly sworn, state as follows:

1. I am an attorney with the law firm of Silvergate & Good, 83 Atlantic Avenue, Boston, Massachusetts 02110, counsel for the petitioner Jeffrey R. MacDonald in the above styled and numbered action.

2. I make this affidavit in support of Jeffrey R. MacDonald's Motion to Reopen 28 U.S.C. § 2255 Proceedings and for Discovery. All statements made herein are based upon information and belief unless otherwise stated.

3. References to affidavits and briefs previously submitted in connection with the 1990 Petition or earlier proceedings are designated herein by the term "(Rec.)" to distinguish them from the affidavits that have been submitted in

III. Agent Malone's Examinations of  
"Natural" Hairs and Other Fibers  
Found at the MacDonald Crime Scene.

16. On October 19, 1990, the defense, in support of Dr. MacDonald's 28 U.S.C. § 2255 Petition Seeking Relief From Conviction Obtained by the Suppression of Exculpatory Evidence (hereinafter "1990 Petition"), filed the Affidavit of John J. Murphy (hereinafter "Murphy Aff. (Rec.)"). In addition to explaining the handwritten laboratory benchnotes concerning the blond synthetic hair-like fibers found in the clear-handled brush at the crime scene and the black wool fibers found on the body of Colette MacDonald and on the wooden club murder weapon, Murphy's affidavit documented the existence of handwritten benchnotes which revealed the presence of hairs and skin that could not be sourced to any member of the MacDonald family found at the crime scene by Army CID investigators. Neither the existence of these notes nor the information in these notes had been disclosed to the defense prior to or during the trial. See Murphy Aff. (Rec.) at ¶¶ 51-64.

17. In his affidavit, Murphy asserted that there were "numerous unmatched human hairs, as well as a piece of human skin, found in the bedding of the victims and in other locations within the MacDonald home." Murphy Aff. (Rec.) at ¶ 65. In support of this assertion, Murphy referred first to handwritten benchnotes on Exhibit E-211/Q-125 (debris removed from the blue top sheet found on the floor of the master bedroom), which confirmed the presence of one unmatched medium brown pubic or

body hair, possibly bloodstained, as well as one piece of skin tissue. Murphy Aff. (Rec.) at ¶¶ 52-56. He then referred to several sets of CID handwritten laboratory notes concerning unmatched hairs found in the bedding of the victims. See Murphy Aff. (Rec.) at ¶¶ 58-64. The laboratory notes on Exhibit E-124, debris from the bedding of Kimberly MacDonald, indicated the presence of an unidentified medium brown pubic or body hair. Murphy Aff. (Rec.) at ¶¶ 58-59. The notes on Exhibit E-52NB/Q-87, the debris removed from the bedding of Kristen MacDonald, likewise indicated the presence of a medium brown pubic or body hair that did not originate from any known sources. Murphy Aff. (Rec.) at ¶¶ 60-64. Thus, Murphy identified at least three hairs and a piece of skin found in the immediate vicinity of the victims' bodies which could not be matched to the known hair samples of MacDonald family members.

18. FBI Agent Michael P. Malone conducted a laboratory re-examination of the unsourced hairs and fibers described in the Murphy Affidavit. See Affidavit of Michael P. Malone, 2/14/91, (hereinafter "Malone Aff. (Rec.)", attached as Exhibit 1 to the Cormier Aff. No. 1, filed herewith). In his affidavit, Malone concluded, among other things, that none of the unsourced hairs noted in Murphy's affidavit provided a forensic basis for MacDonald's claim of factual innocence. Malone supported this conclusion in the following manner:

- (a) He acknowledged the presence of an unidentified "brown body hair of Caucasian origin" which appears to have

been "forcibly removed" and which "appears to have a piece of skin tissue attached to the basal area of the hair" in Exhibit Q-125 (E-211), but concluded that "this body (trunk) hair does not possess sufficient characteristics to be [sic.] value for significant comparison purposes." Malone Aff. (Rec.) at ¶ 23. FOIA materials released by the Department of Justice to MacDonald on November 21, 1996 include notes written by an unidentified government investigator or attorney concerning information which Malone imparted to them with respect to this particular hair and piece of skin. This note, which is attached hereto as Exhibit 4, reads:

Malone: It's a brown caucasian body hair. (It's not limb, head, pubic, or beard, or eyebrow)  
I think it's fringe hair, where groin meets abdomen. It's been ripped out. It appears to have piece of skin tissue attached.  
(MacDonald did have a wound on lower torso.)  
Not enough for DNA. Way too old now.

(Exhibit 4, p. 84)

(b) Malone acknowledged the presence of an unmatched "brown hair of Caucasian origin" in Exhibit Q-87 (E-52NB) and an unmatched "brown limb hair" of "Caucasian origin" in Exhibit Q-93 (E-124), but concluded that neither hair possessed "sufficient characteristics to be of value for significant comparison purposes." Malone Aff. (Rec.) at ¶¶

15 and 21.

(c) Malone also identified two additional exhibits, Q-79/E-303, debris from the rug underneath the trunk and body of Colette, and Q-119/E-5, debris removed from Colette MacDonald's left hand, containing one or more pubic or limb hairs of potential significance to MacDonald's defense. With respect to Exhibit Q-79/E-303, Malone found a "brown pubic hair of Caucasian origin" which "does not appear to have been forcibly removed." He concluded that this hair "exhibits the same individual microscopic characteristics as the specimen K-22 pubic hair sample of Jeffrey MacDonald," and that it is therefore "consitent [sic.] with having originated from Jeffrey MacDonald." Malone Aff. (Rec.) at ¶ 14. With respect to Exhibit Q-119/E-5, Malone also found "four brown limb hairs of Caucasian origin" but concluded that these hairs "did not possess sufficient characteristics to be of value for significant comparison purposes." Malone Aff. (Rec.) at ¶ 22.

19. In addition to the unsourced hairs, Murphy also asserted in his affidavit that the government had found black wool fibers on Colette MacDonald's body and the wooden club murder weapons. These fibers were designated: Q-88 (right biceps area of Colette MacDonald), Q-100 (mouth area of Colette MacDonald), and Q-89 (the wooden club murder weapon that was found outside the MacDonald home). Murphy Aff. at ¶¶ 28-45. Agent Malone conducted a re-examination and confirmed that the

government had in fact found these black wool fibers, which he described as one "bluish-black" wool fiber in Q-88, one "bluish-black" wool fiber in Q-89, and two "dark purple" wool fibers in Q-100. Malone Aff. (Rec.) at ¶¶ 16-18.

20. With respect to these "bluish-black" and "dark purple" wool fibers, agent Malone stated that "the source of [these] . . . fiber[s] is not known due to the absence, at this time, of known standards for comparison." Malone Aff. (Rec.) at ¶¶ 16-18. FOIA materials received by the defense in May 1996 indicate that agent Malone did have available for comparison purposes a number of black or navy blue items that had been taken from the home which apparently turned out not to be the source of these bluish-black and dark purple fibers. (Ex. 5 at 89).

#### IV. Other Unsourced Items Found at the Crime Scene.

21. I also have reviewed numerous handwritten laboratory benchnotes and other government laboratory materials acquired by Dr. MacDonald post-trial under the Freedom of Information Act ("FOIA"). Based on my review of these materials, in addition to those cited in the Murphy and Malone Affidavits, there are numerous other unsourced items such as hairs and blood debris (and also some hairs of which the government's identification is questionable) which were found on or near the victims and in other critical locations at the crime scene. The following are brief summaries of these items, the detailed histories of which are set forth at ¶¶ 30-62, infra.:

(a) Exhibit D-237, the fingernail scrapings from the

left hand of Kristen MacDonald, contains an unsourced light brown, narrow, bloodstained hair with an intact root. See ¶¶ 33-35, infra.

(b) Exhibit D-238, scrapings from the right hand of Kristen MacDonald, may likewise contain one or more unsourced hairs. See ¶¶ 33-35, infra.

(c) Exhibit D-236, the fingernail scrapings from the left hand of Kimberly MacDonald, contains an unsourced light brown, narrow, bloodstained hair. See ¶¶ 36-39, infra.

(d) Exhibit D-235, the fingernail scrapings from Kimberly's right hand, contains un-typed and unsourced blood debris. See ¶ 39, infra.

(e) Exhibit D-233 and D-234, the fingernail scrapings from Colette MacDonald, may contain unsourced hairs, blood debris or skin. See ¶ 40, infra.

(f) Exhibit E-4/Q-118, debris removed from the right hand of Colette MacDonald, contains one bloodstained hair which in 1974, the FBI, using microscopic examination techniques, concluded was from Colette MacDonald's head. See ¶¶ 41-42, infra.

(g) Exhibit D-256, red crusts removed from the hands of Colette MacDonald, contains un-typed blood debris. See ¶¶ 43-44, infra.

(h) Exhibit E-301/Q-78, debris removed from the vicinity of Colette MacDonald's left hand and arm, contains two (or more) unsourced human hairs from the pubic or body

region. See ¶¶ 45-52, infra.

(I) Exhibit D-229/Q-96, the debris from the bedspread found on the floor of the master bedroom, contains one unsourced human hair from the pubic or body region which may or may not be bloodstained. See ¶¶ 53-62, infra.

**IV. THE DEFENSE SEEKS COURT-ORDERED ACCESS  
TO THE PHYSICAL EVIDENCE FOR THE PURPOSE OF  
CONDUCTING FORENSIC EXAMINATIONS AND DNA TESTING.**

22. As noted supra, in light of the pattern of deceptive conduct on the part of Agent Malone in this and other cases, the defense seeks access to all items of physical evidence which Malone or any other FBI agent examined in connection with MacDonald's 1990 Petition, including, but not limited to, natural hairs, fibers and blood debris. In addition, as noted above, based on my review of the FOIA materials, there are other unsourced hairs and blood debris found in critical locations (not necessarily examined by Agent Malone) to which the defense seeks access for the purpose of conducting its own laboratory examinations of these items, including, if appropriate, DNA testing. Based on my review of the FOIA materials, there is no indication that any of the unsourced hairs, skin and blood debris taken from the crime scene in this case has ever been subjected to any form of DNA testing. It is my understanding, and indeed the Court may take judicial notice of the fact, that DNA testing was either not available, or was in its infancy, when the Army CID laboratory and the FBI Laboratory examined the forensic



evidence during the pre-trial investigatory stages of this case.

23. In addition, I have learned that there is a new form of DNA testing, called mitochondrial DNA testing, which the FBI Laboratory has recently begun to utilize in connection with hair examinations. Based on my review of the literature concerning mitochondrial DNA testing and discussions with individuals who are familiar with this type of testing, either this new form of DNA testing or the more commonly used "nuclear DNA testing" might appropriately be used in this case to examine the unsourced hairs and blood debris, as well as conduction re-examinations on certain items found in critical locations which have been identified through more primitive forensic techniques. (Attached hereto as Exhibit 6 are some of the articles I have reviewed which describe the new mitochondrial DNA testing.)

24. As the name suggests, mitochondrial DNA testing obtains its DNA from the mitochondria of the cell, unlike the more conventional form of DNA testing ("nuclear DNA testing"), which obtains its DNA from the nucleus of the cell. While each cell has only one nucleus, it has numerous mitochondria. It is further my understanding that conventional nuclear DNA testing can be used to identify hairs only when there is a follicle or a piece of skin attached to the root of the hair shaft, because only skin/hair follicles contain cell nuclei from which DNA can be extracted. By contrast, mitochondrial DNA testing does not require the presence of a follicle or piece of skin, because the DNA can be extracted from the mitochondria, which are contained

in the hair shaft itself. As reported in some of the attached articles, mitochondrial DNA is much "hardier" than nuclear DNA, meaning that it breaks down much less easily. See Ex. 6.

25. Mitochondrial DNA testing analyzes the DNA sequence of individuals along their maternal line. All maternally-related individuals will have the same mitochondrial DNA sequence unless a mutation has occurred. Hence, a mitochondrial DNA analysis of hair taken from a mother and her children should result in the same DNA sequence for all of them.

26. I also note an article from the November 1996 issue of the American Bar Association Journal describes a rape/murder case in Chattanooga, Tennessee in which the FBI used mitochondrial DNA testing to identify a single hair, found in the throat of the victim, as belonging to the defendant. Exhibit 6 at p. 92. Other articles describe the use of mitochondrial DNA testing in other crime investigations.

27. It is my understanding that hair examinations such as those which I understand to have been conducted pre- and post-trial in the MacDonald case by Agent Malone and others typically consist of a visual examination of the hair under a microscope, in which the examiner compares the questioned hair with known hair samples. Based on such visual examinations under the microscope, the most that can be said about a suspect hair is that it is either "similar" or "dissimilar" in its visible physical characteristics to the known exemplar hair.

28. Based on my understanding of mitochondrial DNA testing, and my review of the FOIA materials which demonstrate the existence of numerous unsourced items of hair, blood and skin debris in this case, I believe that mitochondrial DNA testing could be conducted on hair, blood and skin items to determine with far greater authority and accuracy than previous microscopic examinations the provenance of various items. At the very least, such testing could be conducted to determine whether the source of hitherto unmatched items, such as the unsourced hairs found on the victims and in their bedding, was Jeffrey MacDonald or a member of his family. In addition, such testing could be utilized to confirm the accuracy of prior positive microscopic identifications of certain items, such as hairs found in the victims' hands. For example, E-4/Q118, a hair found in the right hand of Colette MacDonald which was microscopically identified as her own (see ¶¶41-42, infra) might appropriately be analyzed using the new mitochondrial DNA technology. It is obvious in this and other similar instances that this would be a critical determination, since the identification of hairs and fibers unmatched to any person or item in the MacDonald home at strategic locations at the crime scene would be supportive of MacDonald's account that strangers invaded his home and murdered his family.

29. Our own Attorney General has publicly recognized the utility of DNA technology to assure greater accuracy in the search for truth, and has advocated the re-examination of old

crime scene evidence using new forensic technology to correct miscarriages of justice. In June 1996, the National Institute of Justice ("NIJ") published a report entitled Convicted by Juries, Exonerated by Science. Case Studies in the use of DNA Evidence to Establish Innocence After Trial, in which it documented 28 case studies where the defendants were exonerated by DNA testing, after they had been convicted by juries. (An excerpt from the NIJ report is attached hereto as Ex. 7.) Attorney General Reno, in her opening message at the beginning of this report, stated:

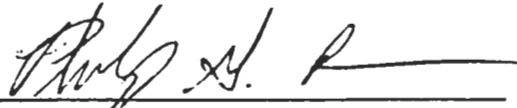
Our system of criminal justice is best described as a search for truth. Increasingly, the forensic use of DNA technology is an important ally in that search. The development of DNA technology furthers the search for truth by helping police and prosecutors in the fight against violent crime. . . . At the same time, DNA aids in the search for truth by exonerating the innocent. The criminal justice system is not infallible . . . .

In addition, Attorney General Reno also gave a keynote address last year before the American Academy of Forensic Sciences, in which she stated:


Laboratories must also be in a position in cases where evidentiary samples have been appropriately preserved and maintained to re-examine, using modern technology, evidence used years ago to convict someone. Properly conducted scientific tests are accurate and impartial and in the right cases, as I've indicated, can correct a miscarriage of justice. Forensic science can play no more important role than that.

Keynote Address By Janet Reno, Attorney General of the United States of America Before the American Academy of Forensic Sciences, February 21, 1996 at Nashville, TN, Alderson Reporting Co., at 15. (A copy of this transcript is attached hereto as Exhibit 8).

agent Malone in connection with the government's response to MacDonald's 1990 petition, but, as indicated above, this exhibit appears to contain an unsourced pubic hair.

  
Philip G. Cormier

Signed and sworn to before me this 19th day of April, 1997.

  
Notary Public, Commonwealth of Massachusetts

My commission expires: June 1, 2001